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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,227	08/27/2003	Zahid Hussain Ayub		4317

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DECKER, JONES, MCMACKIN, MCCLANE, HALL &
BATES, P.C.
BURNETT PLAZA 2000
801 CHERRY STREET, UNIT #46
FORT WORTH, TX 76102-6836

EXAMINER

ZEC, FILIP

ART UNIT PAPER NUMBER

3744

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/648,227	AYUB, ZAHID HUSSAIN	
	Examiner	Art Unit	
	Filip Zec	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 6/6/05 have been fully considered but they are not persuasive.
2. The applicant claims an apparatus utilizing a sump for removing oil in an ammonia refrigeration system. This is taught in U.S. Patent 4,280,337 to Kemp, except that Kemp uses different means for controlling the sump valve. Seener and Olds, both provide the motivation and teach what is not taught in Kemp and is claimed by the applicant. Seener shows an oil level control device comprising an inlet, communicating with the oil supply and an outlet communicating with a compressor sump, with a solenoid valve controlling the flow from the supply into the compressor sump (abstract) to be old in the art. Olds shows a thermal conductivity sensor (24, FIG. 1) used to determine the content of a vessel containing a refrigerant and searching for impurities (oil, col 6, lines 1-20) to be old in the oil removing art. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made from the teaching of Seener and Olds to modify the system of Kemp, by using a thermal conductivity sensor to monitor the oil level and close the solenoid valve when the oil dips below the predefined level in order to accurately detect the oil level change by avoiding the use of a sensor containing moving parts and collecting any damaging ferrous particles associated with its magnetic effect, as used previously in the art (Seener, col 2, lines 35-38; Olds, col 6, lines 15-17).

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3. The applicant argues that the refrigerant used in Olds is different than the refrigerant used in Kemp. This, however, bears no patentable weight when discussing the use of a thermal conductivity sensor. It is the idea and practicality of using *a thermal conductivity sensor* when separating impurities from a refrigerant taught in Olds, which, when combined with teachings of Kemp and Seener, enable one of the ordinary skill of art to produce the same invention claimed by the applicant. Finally, the applicant argues that the solenoid in Seener opens, not closes the valve, which maintains the oil level in the sump. Again, it is the use of a solenoid for *monitoring* the oil level in the sump, which is used for the rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,280,337 to Kemp, in view of U.S. Patent 6,125,642 to Seener et al. and U.S. Patent 5,514,595 to Olds et al. Kemp discloses applicant's basic inventive concept, an automatic oil removal assembly (27, FIG. 1), which removes oil from a vessel containing ammonia and oil (29), having a sump located at the bottom of the vessel (bottom of 29) and the sump having an outlet (pipe section between 29 and 37), with the outlet having a solenoid valve (37), substantially as claimed with the exception of stating the use of an thermal conductivity sensor to provide oil level status input to the valve controlling mechanism. Seener shows an oil level

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control device comprising an inlet, communicating with the oil supply and an outlet communicating with a compressor sump, with a solenoid valve controlling the flow from the supply into the compressor sump (abstract) to be old in the art. Olds shows a thermal conductivity sensor (24, FIG. 1) used to determine the content of a vessel containing a refrigerant and searching for impurities (oil, col 6, lines 1-20) to be old in the oil removing art. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made from the teaching of Seener and Olds to modify the system of Kemp, by using a thermal conductivity sensor to monitor the oil level and close the solenoid valve when the oil dips below the predefined level in order to accurately detect the oil level change by avoiding the use of a sensor containing moving parts and collecting any damaging ferrous particles associated with its magnetic effect, as used previously in the art (Seener, col 2, lines 35-38; Olds, col 6, lines 15-17).

6. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,280,337 to Kemp, in view of U.S. Patent 6,125,642 to Seener et al. and U.S. Patent 5,514,595 to Olds et al., and further in view of U.S. Patent 5,321,956 to Kemp et al. Kemp ('337) in view of Seener and Olds discloses applicant's basic inventive concept, an automatic oil removal system, substantially as claimed with the exception of stating the connection between the outlet and the compressor crankcase. Kemp ('956) (col 2, lines 19-21) shows this feature to be old in the refrigeration art. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made from the teaching of Kemp ('956) to modify the system of Kemp ('337) in view of Seener and Olds, by having a connection between the outlet and the

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compressor crankcase in order to have control means so that an operator may selectively transfer or deliver oil from the tank to each of the compressors as needed (col 2, lines 21-23).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Filip Zec whose telephone number is (571) 272-4815. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Filip Zec
Examiner
Art Unit 3744


CHERYL TYLER
SUPERVISORY PATENT EXAMINER

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